CLAIMS:

1. Method of producing video screen holograms in which a real video screen (11; 31; 41; 51) is illuminated by narrowband light in order to generate a hologram of the real video screen,
characterized in that a plurality of individual recordings is made, in each case only a partial area (11a) of the real video screen (11; 31; 41; 51) being illuminated so that the video screen hologram of the entire video screen is obtained by the composition and/or superimposition of the individual recordings.

2. Method according to Claim 1,
characterized in that the illumination takes place by means of a scanning pulsed laser beam (13; 33; 43; 53).

3. Method according to Claim 2,
characterized in that the pulse duration is dimensioned such that the movement of the laser beam (13; 33; 43; 53) over the video screen (11; 31; 41; 51) has no influence on the interference of the light waves in the hologram.

4. Method according to one or several of the preceding claims,

characterized in that the recorded partial areas (11a) of the video screen (11; 31; 41; 51) correspond at least to the size of image pixels.

5. Method according to one or several of the preceding claims,
characterized in that the lumination takes place by means of a pulsed diode-pumped solid-state continuous-wave laser (16).

6. Method according to one or several of the preceding claims,
characterized in that a frequency conversion takes place in one or several of the wavelength ranges red, green, blue.

7. Method according to one or several of the preceding claims,
characterized in that a contact hologram or a video screen hologram is produced.

8. Method according to one or several of the preceding claims,
characterized in that a transmission hologram or a reflection hologram is produced.

9. Method according to one or several of the preceding

claims,
characterized in that laser beams (13; 33; 43; 53) of a coherence length are generated which is greater than the difference of the light paths between the object beam and the reference beam.

10. Method according to one or several of Claims 2 to 9, characterized in that the scanning rate and the pulse duration are mutually coordinated such that the movement of the laser beam (13; 33; 43; 53) during a pulse is smaller than 1/10 of the wavelength.

11. Method according to one or several of the preceding claims,
characterized in that a repeated scanning of the video screen surface takes place by means of a respectively phase-shifted laser beam (13; 33; 43; 53).

12. Method according to one or several of the preceding claims,
characterized in that the distribution of the lumination in the hologram is measured in order to correct the lumination in the case of a subsequent lumination cycle.

~~13. Method according to one or several of the preceding~~

claims,
characterized in that several luminations are carried out with mutually perpendicularly polarized light or laser beams (13; 33; 43; 53) in order to produce two mutually independent screen images in the hologram (12; 32; 42; 52).

14. Method according to one or several of the preceding claims,
characterized in that several luminations are carried out with changed recording parameters, such as a changed site of the real video screen or a changed place of origin of the reference beam.

15. Method according to one or several of the preceding claims,
characterized in that the lumination takes place simultaneously by light or laser beams (13; 33; 43; 53) of the primary colors red, green, blue which are coaxially adjusted on a beam axis.

16. Device for producing video screen holograms, having a narrowband light source (16; 39; 49; 59; 60) for illuminating a real video screen (11; 31; 41; 51), which is arranged such that the light (17; 30; 40; 50) emanating from the video screen is superimposed with respect to a reference

beam in order to produce a hologram of the video screen, characterized by a scanning device (14, 15; 34, 35; 47, 48; 47', 48'; 57, 58) for guiding the light radiation emanating from the light source over the video screen, the light source generating pulsed light radiation.

17. Device according to Claim 16,
characterized in that the light source (60) simultaneously generates red, green and blue laser radiation.

18. Device according to Claim 16 or 17,
characterized in that the light source (60) comprises a laser system according to one of Claims 19 to 20.

19. Laser system for producing video screen holograms by means of RGB beams, having a laser beam source (61, 62) for generating laser radiation (13; 33; 43; 53), a frequency conversion device (63), and an optical parametric oscillator (65),
characterized in that the laser beam source comprises a pulsed q-switched single-frequency IR laser oscillator (61).

20. Laser system according to Claim 19,
characterized in that the laser beam source comprises a laser amplifier (62) which is connected behind the q-switched

single-frequency IR laser oscillator (61).

21. Video screen hologram having a holographic recording material (12; 32; 42; 52) in which a real video screen (11; 31; 41; 51) is stored as a hologram,
characterized in that the video screen hologram contains a plurality of individual recordings, in which in each case a partial area (11a) of the real video screen (11; 31; 41; 51) is imaged as a hologram, the whole image of the video screen resulting from assembled and/or superimposed individual recordings (11a).

22. Video screen hologram according to Claim 21, characterized in that it is produced according to the method of one or several of Claims 1 to 15.